

REMARKS

The above amendments and the following remarks are fully and completely responsive to the Office Action dated July 28, 2004.

Claims 1-5 are pending. Claims 1-5 are rejected. Claims 1 and 2 are objected to. Claims 1-4 are amended. Claims 1-5 are presented for reconsideration. Claim 6 and 7 are added. No new matter is added. All claims are fully supported by at least the Specification.

Specification

The Specification is objected to for informalities. Applicants respectfully note that the objection is moot in view of the amendments indicated herein. Applicants respectfully request withdrawal of the objection.

Claim Objections

Claims 1 and 2 are objected for containing asserted informalities. Applicants respectfully point out that the objections are moot in view of the claim amendments indicated herein. Applicants respectfully request reconsideration and withdrawal of all objections.

Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 3 and 4 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which Applicants regard as the invention.

Applicants have amended claims 3 and 4 to even more particularly point out and distinctly define the subject matter of the present invention.

Applicants submit that the rejection under § 112, second paragraph, is rendered moot in light of these amendments. Accordingly, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, of claims 3 and 4.

Rejection under 35 U.S.C. § 101

Claims 3 and 4 are rejected under 35 USC §101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process.

Applicants have amended claims 3 and 4 to even more clearly define the claimed method. Applicants submit that the rejection under § 101 is rendered moot in light of these amendments. Accordingly, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. § 101 of claims 3 and 4.

Rejections under 35 U.S.C. §102 and 35 U.S.C. §103

Claims 1-5 are rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,463,006 to Abulseme et al. (“Abulseme”). This rejection is traversed.

The Office Action asserts that Abusleme teaches a biopolymer, as claimed in the present invention. Applicants respectfully submit that this assertion is incorrect.

The presently claimed invention concerns only a bipolymer TFE-FMVE. In particular, claim 1 recites, "the percent TFE moles being the complement to 100% of the FMVE moles," which clearly excludes a third monomer from the claimed composition.

In contrast, Applicants note that Abulseme discloses terpolymers of TFE, FMVE and one or more fluorinated comonomers as defined at points (b)(1) and (2) from column 2, line 45 to column 3, line 35, as well as in claim 1, wherein components (a), (b) and (c) are defined. Applicants further note that Abusleme (column 4, lines 10-13) clearly states that TFE and FMVE alone (note, monomers, not copolymers) give terpolymers or tetrapolymers or more complex compositions.

Applicants point out that the Office Action incorrectly refers to the abstract to assert the teaching of a biopolymer in Abusleme. The abstract, clearly discloses three components: PMVE; TFE; and a third component (in bullet point b), ranging from 0.05 to 3%. By definition, the teaching of three polymers relates to terpolymers.

Additionally, the Office Action incorrectly asserts that Example 1 (column 6, lines 6-8) teaches a bipolymer in Abulseme. In this example, the autoclave includes TFE and FMVE, as well as a third monomer, "perfluorpropylvinylether (FPVE) in an amount of 4.1g/l_{H2O}. See, Abusleme, column 7, lines 1-2.

Moreover, the Office Action incorrectly describes Table 1 (column 7, lines 5-23), which summarizes Examples 1-3 and Comparative Example 4, to support the teaching of bipolymers. However, Examples 1-3 each contains terpolymers

of TFE, MEW, and FRVE. See, Abusleme, column 5, line 62 to column 6, line 58.

Applicants note that only comparative Example 4 of the above Table I shows a copolymer of TFE with 4.6% by weight of FMVE, which corresponds to 2.8% by moles (M_w of TFE = 100 and M_w of FVE = 166). See, Abusleme, column 6, line 60 to column 7, line 1. With respect to this disclosure in Example 4, Applicants point out that presently amended claim 1 is not anticipated since the claimed range of FMVE composition is 3.7 – 5.2% by moles. Accordingly, the 2.8% by moles as presented in comparative Example 4 of Abusleme is clearly outside the claimed composition.

For the foregoing reasons, Applicants submit that the presently claimed invention is novel over Abusleme. Accordingly, Applicants request reconsideration and withdrawal of the anticipation rejection of claims 1-5.

Claim 1 is rejected under 35 U.S.C. §102(a)/102(e) as being anticipated by U.S. Patent No. 6,395,834 to Albano et al. ("Albano"). This rejection is traversed.

Applicants note that the Albano discloses a fluoroelastomer matrix having incorporated semicrystalline particles of PTFE or TFE-copolymers. In particular, a preferred composition of fluoroelastomer consists of 50-80% TFE and 20-50% PAVE (e.g., FMVE) by moles. See, Albano, column 4, line 24, composition (d). Applicants further note that Albano discloses another preferred fluoroelastomer composition, wherein the percent FMVE decreases to 15-45%. A third monomer VDF (5-30%) is added to the composition in order to maintain the elastomeric

properties of the polymer composition. See, Albano, column 4, line 25, composition (g).

Applicants submit that the elastomeric properties of the compositions disclosed in Albano are simply a result of higher amounts of FMVE destroying the crystalline structure of PTFE.

In contrast, the claimed composition is a polymer *plastomeric* composition, having the typical mechanical properties of a plastomeric material. The claimed copolymers having plastomeric properties and a lower FMVE amount (i.e., 3.7-5.2% by moles) clearly distinguish the presently claimed invention from Albano.

Additionally, at least one other notable difference between the claimed composition and the compositions disclosed in Albano can be seen as follows. Albano's polymer compositions are tested for compression set at 200° to 230°C after curing. This feature is a very important property required of *elastomeric* materials. Instead, for a *plastomeric* material this test is meaningless, since the plastomer cannot recover any thickness after a compression set at 200°C.

For the foregoing reasons, Applicants submit that the presently claimed invention is novel over Albano. Accordingly, Applicants request reconsideration and withdrawal of the anticipation rejection of claim 1.

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated U.S. Patent No. 5,180,803 to Gibbard ("Gibbard"). This rejection is traversed.

Applicants submit that Gibbard does not concern any novel material, particularly any novel fluoropolymers. Rather, Gibbard concerns a stabilization treatment for the general class of fluoropolymers.

The Office Action asserts that Gibbard anticipates the claimed copolymer composition simply because Gibbard cites bipolymers TFE/PAVE (e.g., FMVE) wherein the molar amount of the FMVE ranges between 0 and 70. See, Gibbard, column 6, line 60 to column 70, line 45. In particular, the Office Action states that Gibbard discloses the preparation of a bipolymer TFE/FMVE with 0-70% by moles of FMVE based on the fact that Gibbard indicates FMVE as one comonomer generally defined as PAVE.

As the Office Action acknowledged, the preparation of copolymer TFE/FMVE is not disclosed anywhere in Gibbard. Accordingly, Gibbard does not teach the preparation of the claimed composition TFE/FMVE with 3.7-5.2% by moles of FMVE.

Applicants further submit that, at the time of the Gibbard disclosure, one skilled in the art would have been familiar with copolymers TFE/PPVE and their relative compositions. However, Applicants note that Gibbard fails to mention the composition TFE/FMVE, as claimed in the present invention, because this composition was not known at the time of the Gibbard disclosure (see priority 1990).

Applicants submit that the Office incorrectly concludes that Gibbard anticipates claim 1 simply because FMVE belongs – as do thousands of other compounds – to the class of perfluoro (alkyl vinyl ether). Accordingly, the Office Action incorrectly concludes that Gibbard anticipates the claimed composition containing 3.7-5.2% by moles of FMVE and also all of its properties and use for

LAN cables. The Office Action's assertion that Gibbard discloses the preparation of a copolymer is not supported by Gibbard.

Gibbard merely discloses a stabilization of fluoropolymers bearing carboxylic acid (-CO₂H) groups (i.e., about all fluoropolymers polymerized with an inorganic peroxide). Just because Gibbard states at column 6, lines 58-59 that said method is applicable to all types of fluoropolymers does not mean that there can no longer be any new fluoropolymers, particularly with respect to the presently claimed invention.

For the foregoing reasons, Applicants submit that the presently claimed invention is novel over Gibbard. Accordingly, Applicants request reconsideration and withdrawal of the anticipation rejection of claim 1.

Claim 2 is rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Gibbard or Albano each individually.

Applicants respectfully traverse this rejection. Based on the foregoing reasons, Applicants submit that the presently claimed invention, as recited in independent claim 1, is distinguishable from the teachings and suggestions of either Gibbard or Albano. Accordingly, Applicants request reconsideration and withdrawal of the rejection of dependent claim 2.

Claims 2-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Abusleme in view of either Gibbard or Albano.

Applicants respectfully traverse the obviousness rejection.

Applicants note that rejected claims 2-5 depend on claim 1, which is novel over the cited prior art, as above shown.

Applicants further remark that Table 2 at page 22 of the present specification shows a clear and surprising improvement obtained by the claimed polymer composition in tests of wire speed (i.e., extrusion rate) and spark test.

The nonobviousness of the presently claimed invention is further demonstrated by the surprising and unexpected improved processability and electric insulation properties achieved by the claimed polymer. None of the three references cited provides results comparable with those obtained by the claimed polymers.

For at the least the above reasons, reconsideration and withdrawal of the rejection of claims 2-5 under 35 U.S.C. §103(a) are respectfully requested.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 1-7 and the prompt issuance of a Notice of Allowability are respectfully solicited.

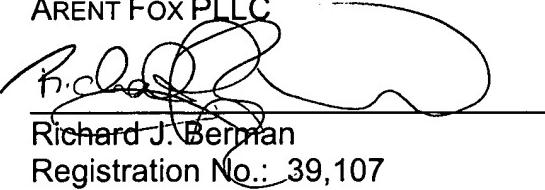
Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

Application Serial No.: 10/619,190
Inventor(s): COLAIANNA et al.
Attorney Docket No.: 108910-00110

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 108910-00110.**

Respectfully submitted,

ARENT FOX PLLC



Richard J. Berman
Registration No.: 39,107

Customer No.: **004372**

1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5339

Telephone No.: 202-857-6000
Facsimile No.: 202-638-4810

RJB/RN/ccd